

# GCSE Mathematics Revision Support 2023

Mrs A Sandham

Head of Mathematics

During this session:

- I will explain to you what support we have in place for your child with GCSE Mathematics
- I will show you some of the resources we use and you can also use these with your child at home



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# Key Information

Exam Board – Edexcel (Pearson)

Higher Tier (Grades 3 - 9)

Foundation Tier (Grades 1 - 5)

**Paper 1 – Non-Calculator**

80 marks

90 mins

**16<sup>th</sup> May**

**Paper 2 – Calculator**

80 marks

90 mins

**3<sup>rd</sup> June**

**Paper 3 – Calculator**

80 marks

90 mins

**10<sup>th</sup> June**



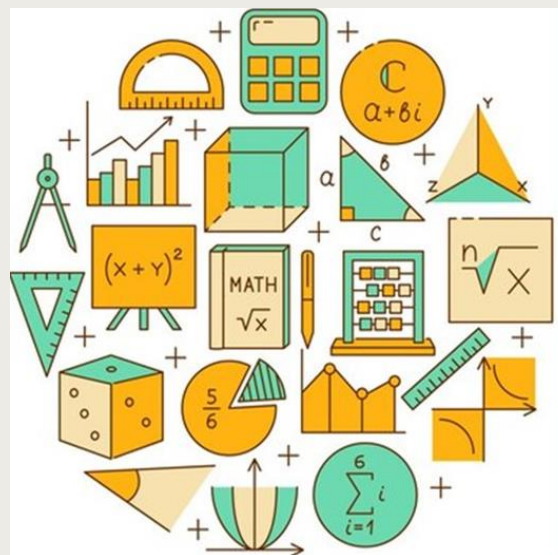
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# Support in School

- At present, students are set half a GCSE paper and MathsWatch or other targeted revision on alternate weeks. Students can drop in to room 1 any lunchtime Tuesday-Friday to get help on particular exam questions. Practice exam papers have also been set for students to do on MathsWatch. MathsWatch marks the work instantly so students get quick feedback. When students are stuck, they can watch a linked video clip for help.
- Individual class teachers may invite certain students to attend additional lunchtime and afterschool sessions.
- Students will focus on key areas each week if they come along to Maths Clinic. This is a targeted revision session.



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## GCSE Maths Clinic

Every Wednesday lunchtime 12.30 – 1pm

Room 4 – Grade 4+ focused revision

Room 6 – Grade 7+ focused revision

Session 1 - Indices

Session 2 - Quadratic Sequences


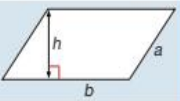
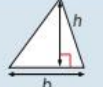
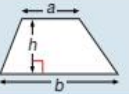
Session 3 -Rearranging Harder Formulae

Session 4 -Algebraic Fractions


Session 5 - Bounds

# Support in School

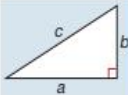
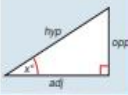
- Students will be provided with weekly revision cards next term to encourage them to learn important facts and formulae in the build up to their exam.
- Please test them at home each week to ensure they have learnt what they need. They should also revisit previous revision cards to help retain the knowledge.
- Exam boards have not yet released whether or not students will receive formulae sheets in their examinations.

Areas	
Rectangle = $l \times w$	
Parallelogram = $b \times h$	
Triangle = $\frac{1}{2} b \times h$	
Trapezium = $\frac{1}{2}(a + b)h$	

Circles	
Circumference = $\pi \times \text{diameter}$ , $C = \pi d$	
Circumference = $2 \times \pi \times \text{radius}$ , $C = 2\pi r$	
Area of a circle = $\pi \times \text{radius squared}$ , $A = \pi r^2$	

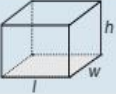
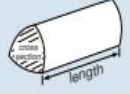


  

Pythagoras	
Pythagoras' Theorem For a right-angled triangle, $a^2 + b^2 = c^2$	
Trigonometric ratios (new to F) $\sin x^\circ = \frac{\text{opp}}{\text{hyp}}$ , $\cos x^\circ = \frac{\text{adj}}{\text{hyp}}$ , $\tan x^\circ = \frac{\text{opp}}{\text{adj}}$	



  

Quadratic equations	
The Quadratic Equation The solutions of $ax^2 + bx + c = 0$ , where $a \neq 0$ , are given by $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$	

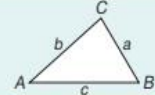
  

Volumes	
Cuboid = $l \times w \times h$	
Prism = area of cross section $\times$ length	
Cylinder = $\pi r^2 h$	
Volume of pyramid = $\frac{1}{3} \times \text{area of base} \times h$	

Compound measures	
Speed $\text{speed} = \frac{\text{distance}}{\text{time}}$	
Density $\text{density} = \frac{\text{mass}}{\text{volume}}$	
Pressure The formula for pressure does not need to be learnt, and will be given within the relevant examination questions.	

Trigonometric formulae	
Sine Rule $\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$	
Cosine Rule $a^2 = b^2 + c^2 - 2bc \cos A$	
Area of triangle = $\frac{1}{2} ab \sin C$	

Foundation tier formulae	Higher tier formulae
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# How to Revise - Exam Papers Practice

Practising exam papers is very important during revision. It gives students a chance to pull their knowledge from different areas quickly when working through questions and also accustoms students to the exam-style question types you might see.

If possible, students should try and work through them in timed conditions so they are not caught out by the timed conditions when it comes to the actual exam.



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## Edexcel GCSE Exam Papers

Pearson Education accepts no responsibility whatsoever for the accuracy or method of working in the answers given.

Grade Boundaries

## Foundation GCSE Exam Papers

Paper	Answers
<a href="#">May 2022 Paper 1</a>	<a href="#">MS</a> <a href="#">Ans</a> ▶
<a href="#">June 2022 Paper 2</a>	<a href="#">MS</a> <a href="#">Ans</a> ▶
<a href="#">June 2022 Paper 3</a>	<a href="#">MS</a> <a href="#">Ans</a> ▶
<a href="#">November 2021 Paper 1</a>	<a href="#">MS</a> <a href="#">Ans</a> ▶
<a href="#">November 2021 Paper 2</a>	<a href="#">MS</a> <a href="#">Ans</a> ▶
<a href="#">November 2021 Paper 3</a>	<a href="#">MS</a> <a href="#">Ans</a> ▶
<a href="#">2020 Paper 1</a>	<a href="#">MS</a> <a href="#">Ans</a> ▶
<a href="#">2020 Paper 2</a>	<a href="#">MS</a> <a href="#">Ans</a> ▶
<a href="#">2020 Paper 3</a>	<a href="#">MS</a> <a href="#">Ans</a> ▶
<a href="#">November 2019 Paper 1</a>	<a href="#">MS</a> <a href="#">Ans</a> ▶
<a href="#">November 2019 Paper 2</a>	<a href="#">MS</a> <a href="#">Ans</a> ▶



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12 Express  $0.1\bar{17}$  as a fraction.  
You must show all your working.

$$\begin{aligned}0.1\bar{17} &= x \\1.\bar{17} &= 10x \\117.\bar{17} &= 1000x \\116 &= 990x \\ \frac{116}{990} &= x\end{aligned}$$

$$\frac{116}{990}$$

(Total for Question 12 is 3 marks)

# How to Revise - Topic Specific Practice

Through doing past papers, students can then identify specific topics they need to focus on.

It may be helpful to watch YouTube tutorials and start with the basics before working on more complex questions.



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The screenshot shows the YouTube channel page for 'The GCSE Maths Tutor'. The channel name is 'The GCSE Maths Tutor' with a verified badge. The handle is '@TheGCSEMathsTutor', with 218K subscribers and 359 videos. A bio reads: 'Welcome to the TGMT YouTube channel, where education meets entertainment! We believ...'. The website 'thegcsemathstutor.co.uk' and 5 more links are listed. There are 'Subscribe' and 'Join' buttons. The navigation menu includes Home, Videos, Shorts, Live, Playlists, Community, and Store. A video thumbnail is shown with the text 'GCSE MATHS TUTOR THE WHOLE GCSE IN 2 HOURS PASS YOUR GCSE'. The video title is 'Everything You Need To Pass Your GCSE Maths Exam! Higher ...', with 1,274,757 views and posted 4 years ago. The description states: 'A video revising the techniques and strategies for all of the fundamental topics that you need to achieve a grade 5 and above in GCSE maths. These topics are the essential 'crossover' topics that appear on both the higher and foundation papers in the (9-1) maths GCSE. This however is not ALL of the topics within the GCSE. ...'. A 'READ MORE' link is present.

# The GCSE Maths Tutor - YouTube



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## Grade 5 Revision Topics (Crossover Playlist) ▶ Play all

Everything You Need To Pass Your GCSE Maths Exam!...	All the GCSE Maths Formulas and How to use Them!!  ...	Speed, Distance & Time Without a Calculator 🤖  ...	Compound Interest without a Calculator (Paper 1 Non-...  ...	Problem Solving with Loci   Loci & Construction   Grade...  ...	Probability Trees (Dependent Combined Events)  ...  ...
The GCSE Maths Tutor ✓ 1.2M views • 4 years ago	The GCSE Maths Tutor ✓ 63K views • 2 years ago	The GCSE Maths Tutor ✓ 40K views • 2 years ago	The GCSE Maths Tutor ✓ 22K views • 2 years ago	The GCSE Maths Tutor ✓ 43K views • 2 years ago	The GCSE Maths Tutor ✓ 97K views • 3 years ago

## Aiming for Grades 7-9 Maths Series ▶ Play all

Everything for a Grade 6-9 in your GCSE Maths Exam!...	The 10 Hardest GCSE Maths Questions 2023   Part 1  ...	The 10 Hardest GCSE Maths Questions 2023   Part 2  ...	All the GCSE Maths Formulas for a Grade 6-9 and How to...  ...	All The Topics You NEED To Know For The 9-1 Maths...  ...	Completing the Square & Turning Points (Higher Only...  ...
The GCSE Maths Tutor ✓ 788K views • 4 years ago	The GCSE Maths Tutor ✓ 189K views • 4 years ago	The GCSE Maths Tutor ✓ 55K views • 8 months ago	The GCSE Maths Tutor ✓ 42K views • 2 years ago	The GCSE Maths Tutor ✓ 20K views • 3 years ago	The GCSE Maths Tutor ✓ 159K views • 4 years ago

## Grade 9 Maths Revision Series ▶ Play all

The 10 Hardest GCSE Maths Questions 2023   Part 2  ...	The 10 Hardest GCSE Maths Questions 2023   Part 1  ...	All the GCSE Maths Formulas for a Grade 6-9 and How to...  ...	How To Find The Exact Trigonometric Values - Tric...  ...	Vectors & Vector Proofs (Vector Geometry)   Grade 9...  ...	Probability Equations   Grade 9 Maths Series   GCSE Math...  ...
The GCSE Maths Tutor ✓ 55K views • 8 months ago	The GCSE Maths Tutor ✓ 189K views • 4 years ago	The GCSE Maths Tutor ✓ 42K views • 2 years ago	The GCSE Maths Tutor ✓ 92K views • 4 years ago	The GCSE Maths Tutor ✓ 248K views • 3 years ago	The GCSE Maths Tutor ✓ 93K views • 3 years ago

Fundraiser



## GCSE Revision

Search for topics...

### Grade 1

Videos	Exam Questions	Exam Questions Booklet	Solutions
<a href="#">Addition and Subtraction</a>	<a href="#">Exam Questions</a>	<a href="#">Addition and Subtraction</a>	<a href="#">Solutions</a>
<a href="#">Multiplication and Division</a>	<a href="#">Exam Questions</a>	<a href="#">Multiplication and Division</a>	<a href="#">Solutions</a>
<a href="#">Time</a>	<a href="#">Exam Questions</a>	<a href="#">Time</a>	<a href="#">Solutions</a>
<a href="#">Writing, Simplifying and Ordering Fractions</a>	<a href="#">Exam Questions</a>	<a href="#">Writing, Simplifying and Ordering Fractions</a>	<a href="#">Solutions</a>
<a href="#">Place Value</a>	<a href="#">Exam Questions</a>	<a href="#">Place Value</a>	<a href="#">Solutions</a>
<a href="#">Rounding</a>	<a href="#">Exam Questions</a>	<a href="#">Rounding</a>	<a href="#">Solutions</a>
<a href="#">Negative Numbers</a>	<a href="#">Exam Questions</a>	<a href="#">Negative Numbers</a>	<a href="#">Solutions</a>
<a href="#">Powers and Roots</a>	<a href="#">Exam Questions</a>	<a href="#">Powers and Roots</a>	<a href="#">Solutions</a>
<a href="#">BIDMAS</a>	<a href="#">Exam Questions</a>	<a href="#">The Order of Operations</a>	<a href="#">Solutions</a>
<a href="#">Factors and Multiples</a>	<a href="#">Exam Questions</a>	<a href="#">Factors, Multiples and Primes</a>	<a href="#">Solutions</a>
<a href="#">Coordinates</a>		<a href="#">Coordinates</a>	<a href="#">Solutions</a>
<a href="#">Pictograms</a>		<a href="#">Pictograms</a>	<a href="#">Solutions</a>



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mathsgenie.co.uk	Please do not write on this sheet	mathsgenie.co.uk
<p>1 Work out an estimate for the value of <math>\frac{48.7 \times 61.2}{11.3}</math> (3 marks)</p> <hr/> <p>2 Work out an estimate for the value of <math>\frac{41.2 \times 19.8}{0.49}</math> (3 marks)</p> <hr/> <p>3 Work out an estimate for the value of <math>\frac{28.4 \times 21.05}{5.9}</math> (3 marks)</p> <hr/> <p>4 Work out an estimate for the value of <math>\frac{7.4 + 23.05}{0.196}</math> (3 marks)</p> <hr/> <p>5 Work out an estimate for the value of <math>\frac{91.25 \times 4.87}{2.31}</math> (3 marks)</p> <hr/> <p>6 Work out an estimate for the value of <math>\frac{18.3 + 62.8}{0.13}</math> (3 marks)</p> <hr/> <p>7 Work out an estimate for the value of <math>\frac{21.75 + \sqrt{98.1}}{0.192}</math> (3 marks)</p>	<p>8 Work out an estimate for the value of <math>\frac{8.3 \times 18.7}{0.52}</math> (3 marks)</p> <hr/> <p>9 Eddie and Ellen use a calculator to work out <math>\frac{431.1}{14.3 + 3.8^2}</math> Eddie's answer is 1.5 Ellen's answer is 15 One of those answers is correct. Use approximations to find out which answer is correct. (3 marks)</p> <hr/> <p>10 Ciara drives an average of 43.6 miles per week (a) Work out an estimate for the number of miles Ciara drives in a year. (2) (b) Is your answer to part (a) an underestimate or an overestimate? Give a reason for your answer. (1) (3 marks)</p> <hr/> <p>11 Dennis gets paid £8.21 per hour he works. Each week Dennis works 41 hours. (a) Work out an estimate for the amount Dennis gets paid in a week. (2) (b) Is your answer to part (a) an underestimate or an overestimate? Give a reason for your answer. (1) (3 marks)</p>	
Grade 3	Estimation	Grade 3

# Corbett Maths

(<https://corbettmaths.com/>)

Corbett Maths is a free site that your child can access that provides a great deal of supporting material and question practice.



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# Corbettmaths

[Welcome](#) [Videos and Worksheets](#) [Primary](#) [5-a-day](#) [More](#) [Revision Cards](#)

Welcome

**5-a-day**

**Videos**

**Worksheets**

**GCSE Revision**

Percentages: change [Video 233](#) [Practice Questions](#) [Textbook Exercise](#)

Percentages: of an amount (non-calc) [Video 234](#) [Practice Questions](#) [Textbook Exercise](#)

Percentages: of an amount (calc) [Video 235](#) [Practice Questions](#) [Textbook Exercise](#)

Percentages: compound interest [Video 236](#) [Practice Questions](#) [Textbook Exercise](#)

Percentages: simple interest [Video 236a](#) [Practice Questions](#) [Textbook Exercise](#)

Percentages: expressing as [Video 237](#) [Practice Questions](#) [Textbook Exercise](#)

Percentages: increasing\decreasing [Video 238](#) [Practice Questions](#) [Textbook Exercise](#)

Percentages: multipliers [Video 239](#) [Practice Questions](#) [Textbook Exercise](#)

Percentages: reverse [Video 240](#) [Practice Questions](#) [Textbook Exercise](#)

# Corbett Maths

(<https://corbettmaths.com/>)

The 5-a-day is designed to give pupils 5 questions for each day of the year to practice different areas of the maths GCSE. They come complete with answers by clicking on the answers link on the page. The answers are particularly beneficial as they are model answers that show the calculations required to arrive at the answers rather than just the answer itself.



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# Corbettmaths

Welcome Videos and Worksheets Primary 5-a-day  $\vee$  More  $\vee$  Revision Cards

Welcome

**5-a-day**

**Videos**

**Worksheets**

**GCSE Revision**

## Monthly Download

[Numeracy](#) [Foundation](#) [Foundation Plus](#) [Higher](#) [Higher Plus](#)

## November

1st November [Numeracy](#) [Foundation](#) [Foundation Plus](#) [Higher](#) [Higher Plus](#)

2nd November [Numeracy](#) [Foundation](#) [Foundation Plus](#) [Higher](#) [Higher Plus](#)

3rd November [Numeracy](#) [Foundation](#) [Foundation Plus](#) [Higher](#) [Higher Plus](#)

4th November [Numeracy](#) [Foundation](#) [Foundation Plus](#) [Higher](#) [Higher Plus](#)

5th November [Numeracy](#) [Foundation](#) [Foundation Plus](#) [Higher](#) [Higher Plus](#)

6th November [Numeracy](#) [Foundation](#) [Foundation Plus](#) [Higher](#) [Higher Plus](#)

7th November [Numeracy](#) [Foundation](#) [Foundation Plus](#) [Higher](#) [Higher Plus](#)

8th November [Numeracy](#) [Foundation](#) [Foundation Plus](#) [Higher](#) [Higher Plus](#)

9th November [Numeracy](#) [Foundation](#) [Foundation Plus](#) [Higher](#) [Higher Plus](#)

10th November [Numeracy](#) [Foundation](#) [Foundation Plus](#) [Higher](#) [Higher Plus](#)

[NOVEMBER ANSWERS - CLICK HERE](#)

# Corbett Maths

(<https://corbettmaths.com/>)

Corbett Maths will also produce practice papers available for pupils once the first paper has been sat, i.e. they will analyse the first paper of the GCSE and produce a paper that will practice the outstanding topics. Similarly once two papers have been sat they will produce a practice paper geared towards topics that are more likely to appear on the final GCSE paper. These final practice papers will be invaluable to support Year 11 pupils revision once exams have started. Corbett Maths also make revision cards available for purchase.



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## Corbettmaths

[Welcome](#) [Videos and Worksheets](#) [Primary](#) [5-a-day](#) [More](#) [Revision Cards](#)

Welcome

**5-a-day**

**Videos**

**Worksheets**

**GCSE Revision**

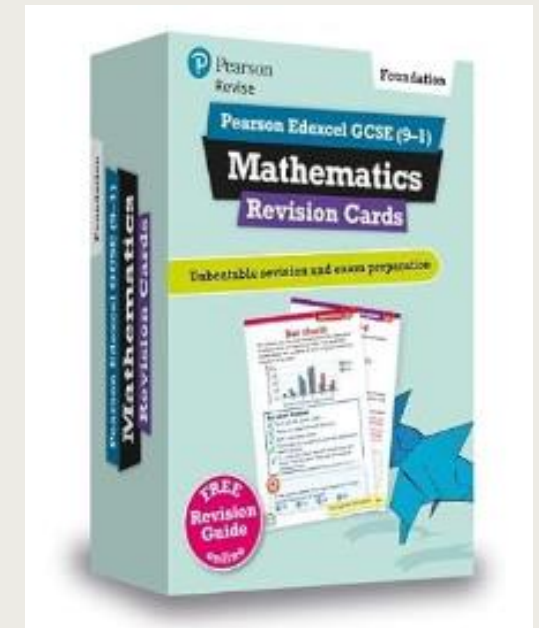
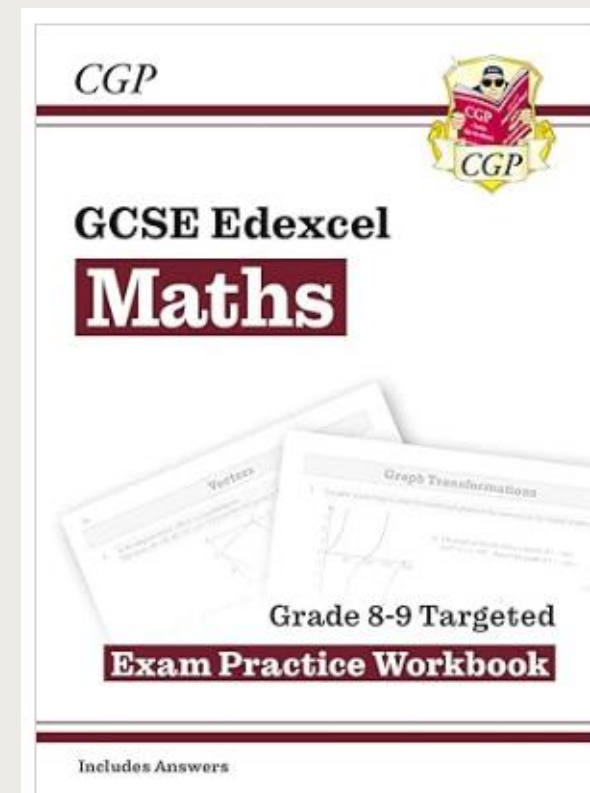
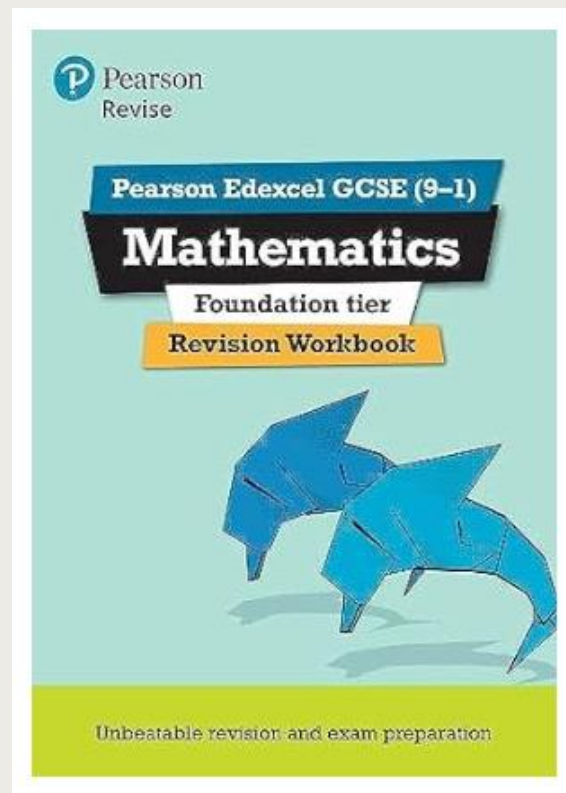
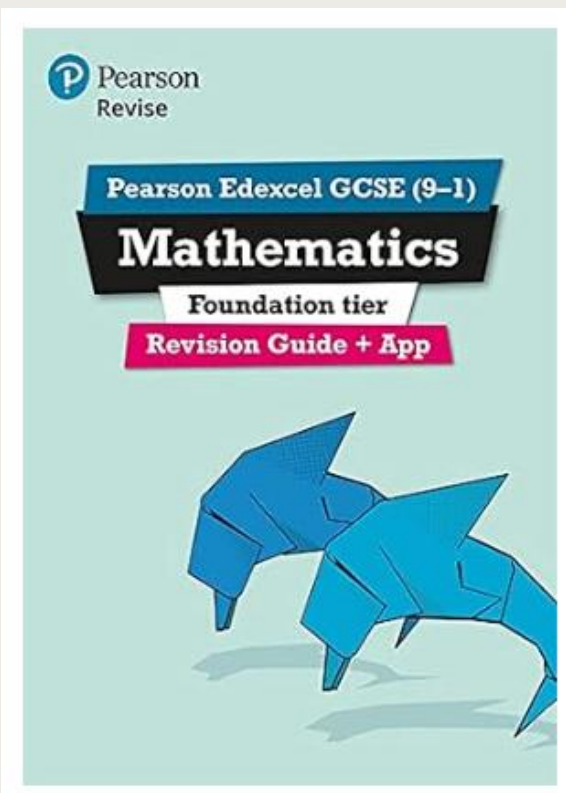
# Revision Guides

There are a number of revision guides available for use with the 9-1 Maths GCSE. Whilst most of these will be suitable, the one we recommend is produced by Pearson. Students will need either a foundation or higher tier revision guide and workbook. Pearson also sell ready made revision cards which some students may find helpful.



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CGP also offer a further book for those pupils on the Higher tier that are working towards the very top grades of 8 and 9.



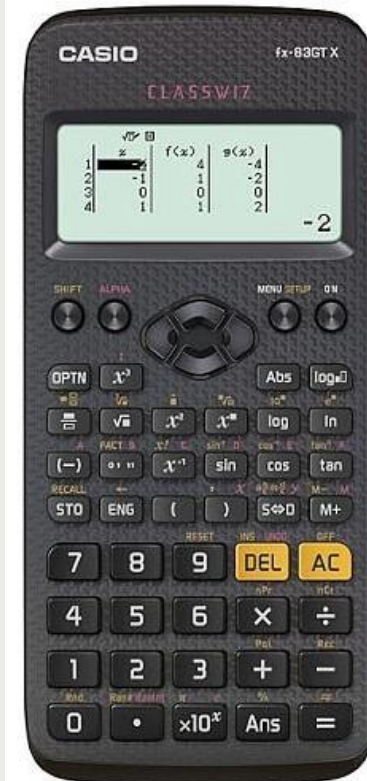
# How Can You Help?

Some practical suggestions:

- 100% attendance
- Essential equipment – fully stocked pencil case and calculator (Casio FX83-GT range)
- Encourage and help them manage their stress
- Help them to develop independent study habits
- Remind them of key dates
- Make and monitor a weekly revision plan
- Ensure that they take advantage of all the support provided in school
- Guide them to appropriate resources for learning (revision guide, websites and past papers)
- Help them with active revision techniques



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# Top Tips



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**1. Don't just read through a textbook!** The only way to revise maths is to do maths. The more questions you do yourself, the more you will get right, the higher your confidence will be, the more you will enjoy your revision, and the better you will do in the exam.

**2. Don't just practice the topics you can do.** If you are really good at fractions, for example, it is very tempting to keep doing lots of fractions questions. But unfortunately, the exam is probably not going to have more than one or two fractions questions. Although it can be painful, work your way through the topics that you struggle with, because it is much better to struggle on them at home, when you have time on your side and the answers available, than it is to struggle in the exam.

**3. Make sure you ask for help.** Again, once you are in the exam you are on your own, but during revision you are certainly not. If you are stuck on a topic or a question, then ask one of the people from your class, or your teacher, or someone at home or look on the internet.

**4. Practice doing questions under exam conditions.** Get someone to pick you a set of questions from your textbook, or get some from a maths website, and try doing them in silence, with no help, for a fixed amount of time. This will get you used to what it will be like in the exam, how fast you need to go, and is the best way of checking that you really understand a topic.

**5. Practice using your calculator!** All calculators work differently, and unless you have used yours for lots of different types of questions (trig, Pythagoras, negative numbers, indices), you might come stuck in the exam. Find out if there are any problems early enough to correct them!

**6. If it works for you, try revising with a friend for a bit of the time.** You will find that one of you understands one topic more, whilst the other is a bit of an expert on another. Just by explaining things to a friend, you will find that your understanding increases, and likewise you might learn a different way of thinking about and understanding a topic.